



United States
Department of
Agriculture

A collage of various agricultural and natural scenes from Missouri, including an irrigation system, a dirt road, turkeys, corn plants, a horse, a river, and a herd of cattle.

NRCS in Missouri

Fiscal Year 2008

NRCS and its partners in Missouri helped land users
plan and apply conservation systems
on more than 900,000 acres during Fiscal Year 2008.





NRCS provided assistance to establish irrigation management systems on 28,500 acres in Missouri, helped establish prescribed grazing systems on 126,300 acres in the state's grassland areas, assisted with pest management on 96,900 acres, and nutrient management on 137,700 acres. NRCS also helped landowners improve wildlife habitat on 83,100 acres throughout the state and to re-establish or improve 6,800 acres of forestland in the state.

NRCS provided assistance to Missouri landowners to improve air quality and conserve energy by assisting with the installation of nearly 25,000 feet of windbreak around farmsteads and animal feeding facilities. NRCS also helped conserve energy by providing assistance to reduce cropland tillage on 195,700 acres and to add legumes to existing crop rotations on 269,300 acres.

Missouri's natural resources conservation team also provided technical assistance to install 106 animal waste management systems through the implementation of comprehensive nutrient management plans.

Conservation Technical Assistance (CTA)

Technical assistance is simply about helping people. The CTA program provides technical assistance supported by science-based technology and tools to help people conserve, maintain, and improve natural resources. The CTA program provides the technical capability (including direct conservation planning, design, and implementation assistance) that helps people plan and apply conservation on the land. This assistance is provided to individuals, groups, and communities that make natural resource management decisions affecting private, and other non-federal lands.

Conservation Security Program (CSP)

CSP supports ongoing stewardship of private agricultural lands by providing financial assistance for maintaining and enhancing natural resources. CSP identifies and rewards landowners and farmers who are meeting the highest standards of conservation and environmental management.

Since CSP was first offered in 2004, the program has been active in nine watersheds across Missouri, resulting in 1,636 CSP contracts. During Fiscal Year 2008, Missouri's 1,636 contract participants earned payments totaling more than \$28 million.

In 2008, NRCS entered into new CSP contracts with 64 participants in the Lower Missouri-Crooked watershed in central Missouri. These 64 contract participants earned than \$240,000.



Conservation Innovation Grants (CIG)

CIG is a voluntary program intended to stimulate the development and adoption of innovative conservation approaches and technologies. It leverages Federal investment in environmental enhancement and protection in conjunction with agricultural production. Under CIG, Environmental Quality Incentives Program funds are used to award competitive grants to non-Federal organizations, Tribes or individuals.

The University of Missouri received approval in Fiscal Year 2008 to perfect variable-rate nitrogen application on corn using sensors that measure chlorophyll in the crop canopy. The “Helping Corn and Cotton Producers to Reduce Nitrogen Loss Using Crop Sensors” project will result in an Economic Optimum Nitrogen Rate that corn and cotton producers can use to gain more efficiency in applying nitrogen fertilizer while maximizing profits. NRCS is providing \$410,317 to support this work.

Through a separate 2006 grant, the University of Missouri received \$241,400 to demonstrate farm profitability from utilizing various management techniques that promote soil and water conservation practices while improving pastures.

The Missouri Department of Conservation (MDC) received \$190,600 for a project initiated during 2005 to evaluate a relatively new grassland management system. The “Evaluation of a Grazing System for Maintaining Grassland Integrity and Improving Upland Bird Habitat” project, commonly referred to as the “patch-burn grazing” project, needed to be investigated before managers and private landowners in Missouri could fully adopt the system. MDC designed



this project to investigate the results of patch-burn grazing on plant species composition, floristic quality and habitat for grassland birds, and cattle performance.

Cooperative Conservation Partnership Initiative (CCPI)

CCPI targets watersheds of special significance and other geographic areas of environmental sensitivity. It funds projects that focus technical and financial resources on conservation priorities in those areas.

The University of Missouri-Columbia received \$181,426 to complete rapid watershed assessments on four Missouri watersheds: Sac River; South Grand River; Lower Osage River; and the Lower Gasconade River. The assessments will provide initial estimates of where conservation investments would best address the concerns of landowners, conservation districts, and other community organizations and stakeholders. Landowners and leaders can use this information to set local priorities and determine the best actions to achieve their goals.

Environmental Quality Incentives Program (EQIP)

EQIP promotes agricultural production and environmental quality as compatible goals. It provides financial and technical assistance to install or implement structural and management conservation practices on agricultural land.

Missouri farmers received \$24.8 million in EQIP financial assistance in Fiscal Year 2008. It funded 1,756 of the 2,703 Missouri EQIP applications. This financial assistance will help install conservation practices that will reduce soil erosion, use water more efficiently, and improve grazing land, wildlife habitat and water quality.





The above photos show a Lawrence County stream clogged with debris following flooding in March, 2008. The photo on the left was taken March 20, 2008. The photo on the right was taken April 16, 2008, after the removal of debris and logjams. The cleanup was funded by EWP.

Emergency Watershed Protection (EWP)

The Emergency Watershed Protection program provides technical and financial assistance to reduce hazards to life and property from floods, ice storms, earthquakes, tornadoes, or other watershed impairments caused by a natural event. All practices must be economically and environmentally defensible and conform to NRCS technical standards. Typical work in Missouri includes repair of floodplain levees, removal of sediment and debris from drainageways, removal of logjams that cause significant problems, and streambank protection near public facilities.

During Fiscal Year 2008, NRCS provided EWP assistance for recovery from four storms:

- A 2007 ice storm resulted in 54 Damage Survey Reports (DSRs) requesting \$1 million in financial assistance. The EWP work provided benefits worth \$3 million to about 194,000 people.
- A March 2008 flood resulted in two exigency DSRs to repair levee failures. NRCS provided \$1 million in financial assistance, which resulted in \$3 million in benefits for 35 private properties, 84 public properties, and more than 186,000 residents in southeastern Missouri.
- A May 2008 flood resulted in 31 DSRs for \$1.5 million in financial assistance, with benefits exceeding \$7.2 million to more than 10,000 people, 114 private properties and 10 public properties. Projects were primarily to repair levee failures in northwestern Missouri.

- In response to a June 2008 flood, NRCS provided \$250,000 in financial assistance for repair of levee failures in northwestern Missouri.

Farm and Ranch Land Protection Program (FRPP)

FRPP provides an opportunity for USDA to purchase development rights from private landowners to keep productive farmland in agricultural use and to protect historical sites on agricultural land. USDA provides matching funds to organizations with existing farmland protection procedures to help them acquire permanent conservation easements from landowners interested in maintaining their current farming enterprise.

In Fiscal Year 2008, Missouri NRCS enrolled one tract which would protect 10 more acres adjacent to Wilson's Creek National Battlefield, near Springfield, from development. Two tracts protecting 180 acres in the same area were enrolled the previous year.

Grassland Reserve Program (GRP)

GRP offers landowners an opportunity to restore and protect grassland and pastureland rather than converting it to cropland or other uses. In Fiscal Year 2008, more than \$80,000 in financial assistance was paid to Missouri landowners to permanently protect 224 acres of grassland from conversion.



Grazing Lands Conservation Initiative (GLCI)

The Grazing Lands Conservation Initiative is a nationwide collaborative process of individuals and organizations working to maintain and improve the management, productivity, and health of the nation's privately owned grazing land. This process has formed coalitions that represent the grass root concerns that impact private grazing land. The coalitions actively seek sources to increase technical assistance and public awareness activities that maintain or enhance grazing land resources.

In Fiscal Year 2008, NRCS in Missouri received a Congressional earmark for \$890,768 for a cooperative GLCI effort with the Missouri Forage and Grassland Council. The funds were used to:

- conduct an annual educational conference attended by 100 people
- conduct 30 basic grazing schools with attendance of 600
- conduct four advanced grazing schools for 125 people
- conduct four regional forage conference attended by 3,340 people
- conduct 129 field days and workshops attended by 9,431 people
- conduct six district Grassland Evaluation Contests with 314 students representing 67 4-H and FFA teams
- conduct the State Grassland Evaluation Contest with 64 students participating
- host the five-state Heart of America Grazing Conference, attended by 309 people from 12 states.



NRCS State Grassland Specialist Mark Kennedy, center, advises Leon and Helen Kriesler about the condition of plants in one of their paddocks.

Plant Materials Program

The Elsberry Plant Materials Center (PMC) helps protect, conserve and improve natural resources by providing plant materials and plant related technology. It works directly with: land users; industry growers in Illinois, Missouri and Iowa; and federal, state and local partners. The staff researches plants to determine their possible uses in preventing soil erosion, providing wildlife food and cover and in protecting related natural resources.

Suitable plants are released from the PMC and made available through nurseries and commercial seed growers. In Fiscal Year 2008, the PMC released a source identified sideoats gramma named Northern Missouri Germplasm. This is a native prairie plant for conservation uses.

During the PMC's 74-year history, there have been 87 plants released. The value of those plants sold in 2008 by private nurseries and commercial seed growers was approximately \$7.68 million.

The PMC is also increasing its efforts at evaluating plants for bioenergy. A study of in-field weathering effects on biomass yield and biofuel quality of warm-season-grass species is being evaluated at the PMC. This study compares three native species and miscanthus. The PMC is also developing an Indiangrass selection for bioenergy.

Resource Conservation and Development (RC&D)

The premise of the RC&D program is that local people know what is best for their communities. Because of this, local people create and organize their own RC&D areas, define their own goals, and work with a broad range of public and private entities to achieve their objectives.

Missouri's eight, multi-county RC&D areas completed 144 projects during Fiscal Year 2008, and they have 106 active projects. RC&D activities improved water quality, provided information and education assistance, resolved waste utilization issues, and supported rural tourism. They also benefited fish and wildlife, economic development, forestry, cultural resources, and local natural resources.



Resource Inventories: Soil Survey, NRI, and Cultural Resources

The Missouri Cooperative Soil Survey Program provided customers with updated soils information for about 1.7 million acres (about 4 percent of Missouri's land area) during Fiscal Year 2008. Missouri continues to be a national leader in updating and delivering soil survey information in an electronic format. The information is available to all via the National Web Soil Survey website: websoilsurvey.nrcs.usda.gov/app/ and on the Soil Data Mart, soildatamart.nrcs.usda.gov. The Web Soil Survey provides users with tools to build a customized soil map and reports. Geographic Information System (GIS) users can obtain the latest datasets at the Soil Data Mart.

This year, NRCS staffs conducted two statewide natural resources inventories on 4,000 land segments. Each segment was approximately 640 acres, and was part of the annual National Resources Inventory (NRI) program. The NRI is a statistical survey of natural resource conditions and trends on U.S. non-Federal land, with inventories conducted on an annual basis. Information about Missouri's land use and erosion can be found at www.mo.nrcs.gov/technical/nri/nriindex.html.

Watershed Program (PL-566)

The Watershed Protection and Flood Prevention Act authorizes NRCS to provide assistance to local organizations in planning and implementing watershed projects.

Missouri had a \$1.6 million allotment of PL-566 watershed implementation funds in Fiscal Year 2008. The funds were used to award two contracts in two watersheds. The contracts are for constructing five floodwater-retarding structures.

The Caldwell County Commission has acquired 90 percent of the required 900 acres for construction of the 362-acre Little Otter Creek multipurpose reservoir. Construction is scheduled for 2009.

During Fiscal Year 2008, 32 dams with contracts awarded in previous years were constructed.

Wetlands Reserve Program (WRP)

WRP helps landowners restore wetlands on agricultural and non-agricultural lands. Restored wetlands provide wildlife habitat for migratory birds, threatened and endangered species and other wetland wildlife. WRP started as a pilot in Missouri in 1992. To date, 837 applications have been funded statewide encompassing 127,275 acres. NRCS enrolled 18 applications covering 2,056 acres during Fiscal Year 2008.

Wildlife Habitat Incentives Program (WHIP)

WHIP is designed to maintain ecosystem diversity by improving habitats of reduced or declining wildlife populations within agricultural systems. Missouri obligated more than \$1.4 million with 116 contracts during Fiscal Year 2008.



NRCS State Biologist Chris Hamilton, educates students about the value of prairie wildlife.



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